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# RELIABILITY PREDICTION

**Model : SP-300** Data:1999-12-30

| Style | Part Type | Q'ty | $\lambda_g$ | $\pi_Q$ | $\lambda_{eg}$ | % |
|---|---|---|---|---|---|---|
| 9.1 | Resistor-Film, Insulated (RL) | 61 | 0.003700 | 10 | 2.257000 | 38.092 |
| 9.1 | Resistor-Wirewound Power (RW) | 5 | 0.008500 | 10 | 0.425000 | 7.173 |
| 9.1 | Resistor-Film, Variable (RVC) | 1 | 0.040000 | 10 | 0.400000 | 6.751 |
| 9.1 | Resistor-Thermistor (RTH) | 2 | 0.001400 | 10 | 0.028000 | 0.473 |
| 10.1 | Capacitor-Metal, Plastic (CH) | 21 | 0.000510 | 10 | 0.107100 | 1.808 |
| 10.1 | Capacitor-Ceramic(Gen.) (CK) | 20 | 0.001700 | 10 | 0.340000 | 5.738 |
| 10.1 | Capacitor-Aluminum Dry (CE) | 17 | 0.001300 | 10 | 0.221000 | 3.730 |
| 6.1 | Diode-Gen. Purpose Analog | 2 | 0.003600 | 8 | 0.057600 | 0.972 |
| 6.1 | Diode-Switching | 18 | 0.000940 | 8 | 0.135360 | 2.284 |
| 6.1 | Diode-Fast Recovery Power Rectifier | 1 | 0.023000 | 8 | 0.184000 | 3.105 |
| 6.1 | Diode-Power Rectifier / Schottky Power | 8 | 0.002800 | 8 | 0.179200 | 3.024 |
| 6.1 | Diode-Voltage Ref/Reg. (Avalanche & Zener) | 4 | 0.003300 | 8 | 0.105600 | 1.782 |
| 6.1 | Diode-Transient Suppressor/Varistor | 1 | 0.002900 | 8 | 0.023200 | 0.392 |
| 6.10 | Diode-Thyristor/SCR | 1 | 0.002500 | 8 | 0.020000 | 0.338 |
| 6.3 | Transistor-NPN/PNP | 7 | 0.000150 | 8 | 0.008400 | 0.142 |
| 6.4 | Transistor-MOSFET | 3 | 0.014000 | 8 | 0.336000 | 5.671 |
| 6.11 | OPTO-isolator | 2 | 0.027000 | 8 | 0.432000 | 7.291 |
| 6.11 | OPTO-Emitter | 1 | 0.000470 | 8 | 0.003760 | 0.063 |
| 5.1 | Linear Microcircuits | 5 | 0.009500 | 10 | 0.475000 | 8.017 |
| 11.1 | Transformer Switching | 1 | 0.000610 | 3 | 0.001830 | 0.031 |
| 11.2 | Coil Fixed inductor or choke | 4 | 0.000032 | 3 | 0.000384 | 0.006 |
| 15.1 | Connector- Rectangular | 1 | 0.050000 | 2 | 0.100000 | 1.688 |
| 17.1 | Single Connections-Reflow solder | 442 | 0.000069 | 1 | 0.030498 | 0.515 |
| 17.1 | Fuses Clip-Clip Termination | 2 | 0.000120 | 1 | 0.000240 | 0.004 |
| 22.1 | Fuses | 1 | 0.010000 | 1 | 0.010000 | 0.169 |
| 16.1 | Plated Through Hole Circuit Boards | 1 | 0.022000 | 2 | 0.044000 | 0.743 |
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| **Total Failure rate:** | | | | | 5.925172 | 100% |

- **Data Base: MIL-HDBK-217F ,Notice 2, Parts Count**
- **Env.: GB**
- **Exclude: FAN**

**MTBF:** 168771.47 **hrs**

Approved by: David Wang Compiled by: Kim Tseng